#	2004 RTP	FUNDING SOURCE	DESCRIPTION	EST. POTENTIAL REVENUES (In 2007 Dollars)	ENERGY IMPACTS	PROS	CONS	PROJECTS IMPACTED	RECOMMENDATION
1	No	Congestion Pricing Strategy (e.g., regional VMT fee, regional HOT lane network, open-road tolling)	A region-wide pricing strategy used to address congestion and emissions starting in 2015	$25 billion to $50 billion assuming a half-cent to a one-cent VMT charge (2015-2035); for a driver who drives 10,000 miles/year, this would cost about $50 to $100 per year.	This policy reduces total vehicles on the road and subsequently reduces fuel consumption and greenhouse emission while simultaneous raising money for the area. The reduction in congestion can account for a 28% reduction in crashes (found in London Studies).	- Funding stays in the Region - With current advances in technology, could be relatively easy to implement - Can serve as an effective demand management tool and help with air quality conformity - Revenue collection is directly tied to use of the system	- Politically challenging - Currently there is no legislative authority - There is no regional entity to administer/implement such a comprehensive program - Further study is needed	- If Strategy 2 is not recommended for the financially constrained RTP, this Strategy 1 may serve as an alternative funding source for those projects listed under Strategy 2	**Include in the Strategic Plan and continue further study.** **Requisite Milestone:** - Perform further study of congestion pricing as a future financing option although the Federal Government will most likely not accept it as an option at this point.
2	Yes	State and Federal Gas Excise Tax Increase	Additional eight cent per gallon gasoline tax imposed by the State and a eight cent per gallon gasoline tax imposed by the Federal government starting in 2011	$16.9 billion (2011-2035)	A study at UC Davis reports that the short run elasticity of gas has dropped to -0.034 to -0.077 and is more inelastic. This implies that with a ten percent increase in the gas price, there is a less than one percent change in gas consumption. (Source: UC Davis. Evidence of a Shift in the Short-Run Price Elasticity of Gasoline Demand. http://repositories.cdlib.org/ucei/csem/CSEMWP-159)	- Historical precedence - Relatively easy to implement - Revenue distribution mechanism already in place - Revenue collection is closely tied to use of the system	- Politically challenging - Requires periodic adjustments to keep up with inflation and fuel efficiency - Further increase in the use of alternative fuel vehicles hampers revenue potential - Concerns about not adequately receiving the region's fair share of revenues	- Additional Operations and Maintenance for Highway system - Potentially all the major highway corridors requiring additional public funding: High Desert Corridor; CETAP Riv-Orange; 710 Tunnel; 710 South; I-5 HOV & Truck Climbing Lanes	**Include in the Constrained Plan.** **Requisite Milestones:** - Conduct outreach with state and federal elected representatives - Initiate public education program - Draft legislation - Need Congressional or State Legislature approval
3	No	Index State and Federal Gas Tax	Index to inflation (3.8 percent annually)	$20 billion (2011-2035)	See option #2	- Keeps pace with inflation - Relatively easy to implement - Revenue distribution mechanism already in place - Revenue collection is closely tied to use of the system	- Politically challenging because periodic increases are not necessarily subject to further public discourse - Further increase in the use of alternative fuel vehicles hampers revenue potential - Concerns about not adequately receiving the region's fair share of revenues	- Additional Operations and Maintenance for Highway system - Potentially all the major highway corridors requiring additional public funding: High Desert Corridor; CETAP Riv-Orange; 710 Tunnel; 710 South; I-5 HOV & Truck Climbing Lanes	**Include in the Strategic Plan and continue further study.**
4	Yes	Highway Tolls	Tolls assumed for the 710 Tunnel, 710 South (truck lanes), CETAP Riv-Orange, High Desert Corridor	Only applicable to specific projects; revenue potential varies (e.g., for the 710 Truck lane prior studies have indicated that toll revenues could cover about 1/3rd of capital costs)	With a shift of about half the amount of travel from congested to uncongested times and places, fuel reductions could reach 10 percent. (Based on SCAG Energy Consultant Work)	- Generates additional source of revenue for transportation projects - With current advances in technology, could be relatively easy to implement - Can serve as an effective demand management tool and help with air quality conformity - Revenue collection is directly tied to use of the system - AB1467 authorizes the region to implement tolls/user-fees for goods movement projects	- Politically challenging (perceptions of equity, privacy, and opposition from trucking industry, etc.) - Currently there is no legislative authority for non-goods movement related facilities	-High Desert Corridor; CETAP Riv-Orange; 710 Tunnel; 710 South (truck lane)	**Include in the Constrained Plan (specific project generated tolls).** **Requisite Milestones:** - Conduct outreach with state and federal elected representatives - Initiate public education program - Draft authorizing legislation for specific projects - Need legislative approval - Need traffic and revenue analyses - Comprehensive financial/business plan

#	2004 RTP	FUNDING SOURCE	DESCRIPTION	EST. POTENTIAL REVENUES (In 2007 Dollars)	ENERGY IMPACTS	PROS	CONS	PROJECTS IMPACTED	RECOMMENDATION
5	Yes	Container Fees	Charge imposed on containerized cargo moving through the Ports/Region	Example: A $50/TEU charge would generate apprx. $45.6 billion (2009-2035)	Unknown	- Generates income consistent with growth of port traffic - 70 percent of containers are destined for markets outside of southern California--facilitates equitable cost allocation - Container fees should be directly tied to capacity expansion projects to facilitate the movement of goods - AB1467 authorizes the region to implement tolls/user-fees for goods movement projects - The Ports of LA and LB are negotiating container fees with shippers - Historical precedence--Alameda Corridor Container Fees	- Politically challenging (opposition from shippers/business community) - Potential diversion of container cargo to other ports (e.g., Panama Canal Expansion) for fees over $200/container	- 710 South (Truck lanes) and Rail Capacity, Grade Separations, and Clean Technology Package	**Include in the Constrained Plan (no more than $200/container per SCAG's Port & Modal Elasticity Study).** **Requisite Milestones:** - (Route 1) Conduct outreach with state elected representatives to pursue legislative approval route - (Route 2) Can continue to work with the Ports to facilitate a negotiated fee structure for a system of regional goods movement projects - Need traffic and revenue analyses - Comprehensive financial/business plan
6	Yes	Local Option Sales Tax Extension for Imperial County	Half-cent sales tax on retail sales in Imperial County--dedicated to transportation purposes. Current sales tax expires in 2010.	$816 million (2011-2035)	Unknown	- Historical precedence - Relatively easy to implement - Revenue distribution mechanism already in place - Dedicated to transportation - Stays in county of revenue generation	- No direct relationship with use of transportation system - Tax is regressive - Needs 2/3rds voter approval - Politically challenging	- Example of projects in Imperial potentially impacted: SR111 freeway and Jasper Rd expressway	**Include in the Constrained Plan.** **Requisite Milestones:** - Work with Imperial County - Initiate public education program/marketing - Local consensus - Surveys - Expenditure plan - Ballot measure by Imperial County
7	No	Local Option Sales Tax Imposition for Ventura County	Half-cent sales tax on retail sales in Ventura County.	$6.2 billion (2011-2035)	Unknown	- Relatively easy to implement - Revenue distribution mechanism already in place - Dedicated to transportation - Stays in county of revenue generation	- No direct relationship with use of transportation system - Tax is regressive - Needs 2/3rds voter approval - Politically challenging - Recent effort was not successful	Additional efforts to widen the 101 may be impacted	**Include in the Strategic Plan and continue to work with Ventura County.**
8	No	Value Capture Strategies	Includes Mello Roos Community District Financing, Benefit Assessment Districts, Joint Development Funds from private sector, real estate sales of Caltrans owned property	Revenue potential can vary; can generate roughly 10% of total capital cost; real estate sales for Caltrans owned property estimated to generate appx. $400 million to partially offset public contribution needs for the 710 Tunnel	Unknown	- Valuable gap funding strategy - Captures the incremental value generated by transportation investments--can be consistent with the Region's transit oriented development goals - Capitalizes on already owned public right-of-way (real estate sales)	- Revenue generating potential is not significant in comparison to cost of the Region's infrastructure needs - Local jurisdiction approval process can be challenging (property owner approval needed)--subject to Prop 218 (supermajority)	- 710 Tunnel (real estate sales); also transit improvements (e.g., Gold Line Extension)	**Include in the Constrained Plan.** **Requisite Milestones:** - Need Caltrans' commitment to utilize proceeds from real estate sales for 710 Tunnel ($400M) - Public outreach with local jurisdictions for Mello Roos and Assessment District financing
9	Yes	Private Equity Participation (PPP)	Public-Private Partnership arrangement whereby a private entity designs, finances, builds, operates and maintains a transportation facility under a lease arrangement for a fixed period of time; project(s) must generate sufficient revenues to be economically viable (user-fees, tolls, etc.). Public sector would forgo revenue from these user-fees in exchange for private development.	Not technically a revenue source; it's an innovative project delivery mechanism that can accelerate projects. Only applicable to specific projects with creditworthy revenue streams.	Unknown	- Can accelerate project implementation - Taps into private sector to fill funding gaps - The private sector can bring expertise and efficiencies - AB1467 authorizes the region to work with private entities for goods movement projects - Facilitates risk sharing amongst private and public stakeholders - There could be revenue sharing for any surplus cash-flows (negotiable with private entity)	- The public sector still needs to make significant financial commitment with predevelopment costs - Lengthy environmental review processes, etc. increases risk for the private sector - PPP arrangements are still fairly new in this country--requires better understanding by public entities to ensure protection of public interest	-High Desert Corridor; CETAP Riv-Orange; 710 Tunnel; 710 South (truck lanes)	**Include in the Constrained Plan for new projects, not selling of public assets.** **Requisite Milestones:** - Need detailed traffic and revenue analyses for specified projects - Comprehensive financial/business plans - Draft authorizing legislation for specific projects (non-GM projects) - Need legislative approval - Establish JPA or regional entity as appropriate to facilitate negotiations with private entity

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
1	Freight Rail	Yes	Rail Expansion + Grade Separations	$9 billion	$800 million committed locally to grade separations	Energy demand may be reduced if Metrolink ridership is increased. Goods movement demand could be overstated given the energy supply uncertainty.	- Expansion is needed for efficiency, expected growth, and Metrolink - Projects are consistent with county commission submittals and the Multi-County Goods Movement Action Plan - Almost $800 million have been committed locally to these projects - Improves public safety	- Inadequate funding commitment	**Include clean technology strategies as package with grade separations and rail expansion in the Constrained Plan.** **Requisite Milestones:** **Work to secure funding sources:** - state bond revenues - container fees - railroad fees - additional local commitment - federal funds for clean technology - private activity bonds
		No	Clean technology for existing and future services	$2.8 billion	$0 committed at this time for clean technology components ($800 million committed locally to grade separations)	The energy impacts are dependent on how the energy is generated. California currently imports about 31 percent of its annual electricity supply from out-of-state generating units, and about 75 percent of this power (4,744 MW) comes from coal. The majority of in-state electricity generation (46%) comes from natural gas. (Source: California Energy Commission, Gross System Power 2006. Retrieved on October 22, 2007 from http://energy.ca.gov/electricity/gross_system_power.html)	- Helps meet air quality attainment goals - Improves public health	- Inadequate funding commitment - Technology/construction risks	
2	Truck Lanes	Yes	2 Lanes in Each Direction: I-710 for 18 miles between Long Beach and SR-60 (this portion also includes mixed-flow improvements); SR-60 for 37.8 miles between I-710 and I-15; I-15 for 86 miles from LA County to SB County	$44 billion	$30 million committed for I-710 EIR/EIS (could be in jeopardy if we do not include in Constrained Plan) ($20 million expended in previous planning studies)	The demand for additional vehicle capacity may be overstated given the energy supply and cost uncertainty.	- Accomodates and provides improved mobility to trucks (close to free flow) - Relieves congestion on general purpose lanes (equivalent to adding more than one free flow lane at less than 40% of the cost) - Expected emission reduction due to congestion relief - Improves public safety	- Inadequate funding commitment - Public opposition - Environmental challenges - Right-of-way challenges	**Include I-710 portion in the Constrained Plan. Include SR-60 and I-15 portions in the Strategic Plan.** **Requisite Milestones:** - local funding commitment (via LACMTA's planning documents or board resolutions) - comprehensive business plan with documentation on tolls and other funding sources
3	Alternative Technology Conveyance for Freight Only Component	No	Fully elevated system over public transportation corridors linking the San Pedro Ports with potential inland port facilities	$18 billion	$0 commitment at this time	As with option #1, the energy impacts are dependent on how the energy is generated. Of the electricity consumed in the SCAG region in 2006, approximately 15 percent was generated from eligible renewables. (Source: California Energy Commission, 2005 Gross System Electricity Production. Retrieved on February 7, 2007 from http://www.energy.ca.gov/electricity/gross_system_power.html)	- Advanced technology holds promise for high-capacity, fast, efficient, and environmentally friendly transport of goods - Improves public health	- Inadequate funding commitment - Location of inland port facilities need to be identified - Port infrastructure requirements/cost needed to keep up with HSRT system - Untested technologies - Little interest from shippers and ports - Operation & Maintenance data is sparse	**Include in the Strategic Plan and revisit after Workshop on passenger HSRT.** **Requisite Milestones:** - local funding commitment - comprehensive business plan with documentation on user fees and other funding sources - institutional authority with implementation ability - supporting documentation of private sector interest
4	Inland Port	Yes (policy discus-sion)	- Advanced technology holds promise for high-capacity, fast, efficient, and environmentally friendly transport of goods - Improves public health	TBD	$0 commitment at this time	If this option encourages efficient land use patterns and reduces VMT, operational energy demand could be reduced. However, increasing the throughput at the port facilitites may be unlikely given the energy supply uncertainties.	- Freight traffic congestion relief through a reduction in regional Vehicle Miles Traveled (VMT) - Reduction in net emissions, particularly diesel particulate matter - Encouragement of efficient patterns of land use and industrial development - Increase in the capacity/throughput of port facilities	- Substantial ongoing operating subsidies - Multimillion dollar capital investments in rail terminals and line-haul capacity - Locating feasible, available sites for a facility - Community concerns	**Include in the Strategic Plan and continue further study.**

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
1	Operations and System Preservation	Yes - Partial	Routine maintenance and early infrastructure repairs. Operational improvements (small physical improvements and technology deployments).	$66 billion (through 2035)	$40 billion commitment ($26 billion unfunded)	This option would generally result in lower energy usage. However, with the continuing escalation of global fuel prices, many transportation projects are beginning to experience unprecedented construction cost increases.(Source: FHWA, http://www.fhwa.dot.gov/programadmin/contracts/price.cfm)	- Maintains or increases mobility - Maintains or increases safety - Maintains or increases efficiency - Improves public safety - Early minor repairs prevent expensive major repairs in the future - Lower cost for maintenance - More cost-effective than capacity expansion projects	- Inadequate funding commitment - Less money is available for expensive capacity expansion projects - Politically unpopular (low-profile)	**Increase level of funding in the Core RTP by up to 40% ($10 billion) above current commitments, recognizing capital investment tradeoffs.** **Requisite Milestones:** - increase in state gas tax and potential bond funding
2	I-710 tunnel	Yes - not as tunnel & not tolled	Gap closure from I-10 to I-210	$11.8 billion	Technical study completed	This option would result in energy usage from construction and operation. Passenger cars use 581 gallons of gasoline per year per car and light trucks use 813 gallons of gasoline per year per vehicle. (Source: U.S. EPA, Office of Transportation and Air Quality, Average Annual Emissions and Fuel Consumption for Passenger Cars and Light Trucks. April 2000, EPA420-F-00-013)	- Increases capacity (one of the best performing capacity projects) - Relieves congestion - Fills in critical gap in the regional network - Tunnel is more environmentally sensitive option - Addresses community concerns - Private investment community has expressed interest in this project (prime candidate for PPP financing)	- Inadequate funding commitment - Expensive investment alternative - Longstanding community opposition - Geological/seismic risks - Safety risks	**Include in the Constrained Plan.** **Requisite Milestones:** - local funding commitment (via MTA's planning documents or board resolutions) - financial/business plan with adequate analysis of tolls and other funding sources - supporting documentation of private sector interest
3	High Desert Corridor	No	New freeway/tollway connecting LA County and SB County	$13.7 billion	Over $70 million committed from SANBAG for portion east of US-395; $0 commitment from Metro	Regulating volume speed could be maintained at a more consistent rate thereby potentially reducing fuel use. In addition, removing vehicles from regular lanes to underutilized HOV lanes can improve flow and fuel efficiency in regular lanes. However, this could facilitate automobile dependent development, increasing overall VMT and energy consumption. Furthermore, the travel demand could be overstated given the energy supply uncertainty.	- Increases capacity - Relieves congestion - Provides east-west connection between high-growth areas - Allows through-traffic, including goods movement, to bypass congested urban core	- Inadequate funding commitment - Environmental concerns	**Include in the Constrained Plan.** **Requisite Milestones:** - local funding commitment (via MTA's planning documents or board resolutions) - financial/business plan with adequate analysis of tolls and other funding sources
4	CETAP Riverside County-Orange County Corridor	Yes	A) New facility on or parallel to SR-91 alignment, **plus** B) New facility connecting Riverside County and Orange County	$22.5 billion	Planning study completed; Funding for Corridor A ($925 million) included in OCTA LRTP	As with #3, this option could facilitate automobile dependent development, increasing overall VMT and energy consumption. Furthermore, the travel demand may be overstated given the energy supply uncertainty.	- Relieves SR-91 congestion - Provides additional intercounty connection between Riverside County and Orange County	- Inadequate funding commitment - Environmental concerns - Right-of-way issues - Requires further study & consensus building	**Include in the Constrained Plan.** **Requisite Milestones:** - local funding commitment from RCTC for Corridor A
5	I-5 HOV and Truck Lanes	No	HOV and truck climbing lanes on I-5 in Santa Clarita	$2 billion	$10 million planning funds for Draft EIR/EIS (includes $1.5 million SAFETEA-LU earmark)	To the extent the vehicles have higher occupancy and are less congested, HOV lanes carry more people per unit of fuel use. Goods movement demand could be overstated given the energy supply uncertainty.	- Increases capacity - Relieves I-5 congestion - Improves public safety - Expands HOV network - Facilitates movement of trucks on major truck corridor	- Inadequate funding commitment - Potential environmental/right-of-way issues	**Include in the Constrained Plan.** **Requisite Milestones:** - local funding commitment (via MTA's planning documents or board resolutions)
6	US-101 Corridor	Yes	2 HOT lanes in each direction from Ventura County Line to SR-134/SR-170	$11.4 billion	Planning study completed	By regulating volume, speed is maintained at a more consistent rate thereby reducing fuel use. In addition, removing vehicles from regular lanes to underutilized HOV lanes can improve flow and fuel efficiency in regular lanes.	- Increases capacity - Relieves congestion, improves mobility - Addresses intercounty commute	- Inadequate funding commitment - Right-of-way constraints - Major community opposition - Requires further study & consensus building	**Include in the Strategic Plan and continue further study.**

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
A	Transit Reliability and Performance	No	Use technology to monitor, report and improve on-time performance through operational improvements, rapid bus technologies, and better scheduling of services.	Limited costs incorporated through O & M funds committed. Total Potential Cost Undetermined.	Some commitments in the existing O & M commitments, but not all resources identified.	This option would reduce fuel consumption. Increases in public transit ridership can proportionately reduce VMT, congestion, fuel consumption and improve air quality.	- Improves customer satisfaction - Improves reliability of trips (number one issue of concern to transit riders) - Increases efficiency - Improves system productivity - Reduces dependence on highway system - Supports TOD investments	- Uncertain funding for O & M	**Develop a policy to encourage the use of new technologies to monitor, enhance, and report transit system reliability and performance.** **Seek funding in next OWP (FY08-09).**
B	Transit Service Levels	No	Increase transit service levels to accommodate regional growth in demand, and to foster increased use.	Total Potential Cost Undetermined	Some commitments in the existing O & M commitments, but not all resources identified.	This option would reduce fuel consumption. A recent study found that current public transit use reduces U.S. gasoline consumption by 1.4 billion gallons each year. (Source: Public Transportation and Petroleum Savings in the U.S.: Reducing Dependence on Oil," by ICF International, January 2007.)	- Can encourage increased use of transit - Greater use of transit for business, social, cultural, and tourism travel - Improves access by transit through reduced travel and wait times	- Uncertain funding for O & M	**Fegional and local operator transit service policies should be assessed to determine how to optimize service levels to achieve maximum potential use of our transit investments.** **Seek funding in next OWP (FY08-09).**
C	Fare policies, Fare media, Subsidies to Transit	No	Adjust transit fares to maximize transit usage, including fare free concepts. Utilize new automated fare media to allow for ease of transit use. Increase subsidy levels to maximize transit ridership.	Total Potential Cost Undetermined	Some commitments in the existing O & M commitments, but not all resources identified.	Increases in public transit ridership can proportionately reduce fuel consumption, VMT, congestion, and improve air quality.	- Greater use of transit - Can reduce long term costs for highway operations and infrastructure, reducing total costs to the region	- Uncertain funding for O & M	**A fare policy should be analyzed to assess the proper level of fares and subsidies to maximize transit use in the Region.** **Seek funding in next OWP (FY08-09).**
D	Increase Transit Connectivity	No	Restructure transit services, as needed, to more effectively connect different urban centers and activities. Enhance connectivity and ease of transfer between transit modes.	Total Potential Cost Undetermined	Some commitments in the existing O & M commitments, but not all resources identified.	Fostering more residential and mixed use developments near transit hubs will increase public transit ridership and reduce VMT, emissions, and fuel consumption.	- Increases connections to urban centers and TOD (supports the Regional Growth Strategy) - Increases connections to activity centers, including retail, cultural, social, and recreational activities - Improved intermodal connections allows for greater use of different modes for different trip needs	- Uncertain funding for O & M	**Regional and local operator transit service policies should be assessed to determine how to optimize connectivity to regional centers, and facilitate intermodal transit service to achieve maximum potential use of our transit investments.** **Seek funding in next OWP (FY08-09).**

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
1	Expo Phase II	Yes	Extension of Expo light rail from Culver City to Santa Monica	$1.1 billion	$256 million programmed	It is estimated that households in Transit-Oriented Developments drive 45 percent less than residents of automobile-dependent neighborhoods. (Source: Transit Oriented Development: Using Public Transit to Create More Accessible and Livable Neighborhoods" Victoria Transport Policy Institute, TDM Encyclopedia, May 2007.http://www.vtpi.org/tdm/tdm45.htm)	- High performing corridor in past RTP's (highest transit demand) - Strong local commitments to TOD - Limited opportunities for expansion of highway/freeway capacity	- Uncertainty over route - Uncertainty over costs	**Include in the Constrained Plan.**
2	Crenshaw Corridor	Yes	Transit Corridor-Technology/Mode Undetermined	$1 billion	$18 million programmed	Potential indirect energy demand for air travel with expanded access to LAX.	- In past RTP's, serves high transit use area - Potential for a branch to Expo - Limited opportunities for expansion of highway/freeway capacity - Potential access to LAX area	- Uncertain funding commitments - Uncertainty over route - Uncertainty over costs - Uncertainty over mode choice - Limited ROW	**Include in the Constrained Plan.**
3	Regional Connector	Yes	LRT Connection between Gold Line and Expo/Long Beach Lines through LA CBD	$2.5 billion	$0 committed at this time	In general, greater connectivity would increase transit ridership, thereby reducing fuel consumption from personal vehicles.	Connection of all Light Rail into a continuous system would allow all systems to interconnect for continuous trips: - Reducing transfers - Increases ridership	- Uncertain funding commitments - Limited ROW - Potential for costly subway construction	**Include in the Constrained Plan.**
4	Orange Line BRT Extension	Yes	Orange Line BRT Extension from Canoga to Chatsworth	$226 million	$118 million programmed for Phase 1 through 4	As with #4, could increase ridership and decrease fuel demand from personal vehicles.	- Low cost BRT extension - Increased use of current Orange Line investment - Connecting services to Metrolink services at Chatsworth	- Serves an area with low current transit ridership.	**Include in the Constrained Plan.**
5	Green Line LRT Extension	Yes	LRT connection into LAX complex by extending the existing Green Line	$402 million	$0 committed at this time-Possible Airport related financing options	As with #2, potential indirect energy impact from expanded access to LAX.	- Improves system connectivity - Improves ground access to LAX - Improved effectiveness of existing Green Line performance	- Uncertain funding commitments - Undetermined access to LAX - Available track capacity Issues with freight railroads	**Include in the Constrained Plan.**
6	Gold Line Extension	Yes	Phase 1: Phased Extension SMV to Azusa II Phase 2: Azusa II to Montclair Phase 3: Montclair to Ontario Airport-newly proposed and still in feasibility study	Phase 1: $511 million Phase 2: $1.5 billion Phase 3: TBD	SCAG includes Phase I to Azusa II as a Baseline Project due to project readiness criteria; LACMTA is unsure on funding O & M, Phase I to Azusa II is not in the MTA proposed list of Baseline projects--SANBAG has committed funding for Phase II Azusa II to Montclair. $36 million - Phase 1 programming	TODs can save an average of 512 gallons of fuel and $1,400 in fuel expenses annually.	- Cities in corridor have strong commitments to TOD - Environmental completed pending ROD for Phase One to Azusa II - Relatively low cost per mile on existing ROW	- Inadequate funding commitment (LACMTA has thus far not committed to operation of Phase I to Azusa II; LACMTA funding has not been identified for the extension to Montclair)	**Include Phases 1 & 2 in the Constrained Plan.** **Include Phase 3 in the Strategic Plan.** **Seek additional State and Federal funds.**

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
7	Purple Line Extension	Yes (to Fair-fax)	Phase 1: Phased Extension Western to La Cienega Phase 2: La Cienega to Century City Phase 3: Century City to UCLA and beyond	Phase 1: $3.3 billion Phase 2: TBD Phase 3: TBD	No committments from LACMTA, at this time.	As with #6, would decrease fuel usage from personal automobiles.	- High performing corridor in past RTP's (highest transit demand) - Strong local commitments to TOD - Limited opportunities for expansion of highway/freeway capacity	- Very limited surface ROW (subway) - High construction costs (subway)	**Include Phase 1 in the Constrained Plan.** **Include Phases 2 & 3 in the Strategic Plan.** **Seek additional State and Federal funds.**
8	Metrolink Strategic Plan	No	Strategic investments in additonal track capacity, signaling, station capacity, cars, locomotives, support facilities, and new service levels to maximize ridership potential	$10 billion	No committments from CTC at this time.	If support for TODs is strong, this option could reduce fuel consumption by reducing personal vehicle usage.	- Maximizes and leverages the current investment in the regional commuter rail system - Supports TOD commitments near stations - Reduces future highway operating and infrastructure demands	- Limited available funding for transit capital and operations	**Include the Metrolink Strategic Plan in the RTP Strategic Plan.** **Pursue funding commitments to include these components in the core RTP.**
9	Temecula Extension Metrolink	No	Extend Metrolink from South Perris to Temecula	$642 million	RCTC commitment to this project by 2025	If ridership can be increased, this option could reduce energy impacts.	Extension of Perris Line: - Good Commuter Rail Performance - Local commitments to 2% strategy	- Serves an area with low current transit ridership.	**Include in the Constrained Plan.** **Seek additional State and Federal funds.**
10	San Jacinto Extension Metrolink	No	Extend Metrolink from South Perris to San Jacinto	$227 million	RCTC commitment to this project by 2025	As with #9, if ridership can be increased, this option could reduce energy impacts.	Extension of Perris Line: - Uses existing ROW - Good Commuter Rail Performance - Local commitments to 2% strategy	- Serves an area with low current transit ridership.	**Include in the Constrained Plan.** **Seek additional State and Federal funds.**
11	LOSSAN Strategic Plan	No	Systemic Capacity and Service improvements on the LOSSAN Rail Intercity Rail Corridor	$7-9 billion	Limited commitments.	Depending on support and energy generation, this option could reduce energy impacts.	- Expands Intercity and Commuter Capacity in the LOSSAN - Relieves congestion in the I-5 and 101 Corridors, improves utilization of existing investments - Potential for future inter-regional funding or Amtrak reauthorization	- Uncertain funding commitments	**Include committed portions in the Constrained Plan.** **Include uncommitted portions in the Strategic Plan.** **Seek additional State and Federal funds.**
12	Orangeline (Orangeline Development Authority)	Yes	108-mile grade-separated, elevated Maglev down the Pacific Electric ROW through central Orange County to L.A. Union Station out to Santa Clarita and Palmdale. The Orangeline Development Authority (OLDA) is a JPA made up of cities from L.A. and Orange Counties. The financial plan calls for private funding for most capital costs.	$42.5 billion	-$250,000 planning grant from the federal government -$1 million in-kind commitment from private sector group led by Arcadis -Dues from 14 member cities of the JPA -No other financial commitment from the private sector at this time	As with #11, depending on support and energy generation, this option could reduce energy impacts.	-Environmentally friendly -Helps regional economy -Increases transit ridership -Relieves overcrowding at LAX and shifts air passengers to Ontario, Palmdale, San Bernardino and March airports -Improves public health -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, CHSRA)	-Inadequate funding commitment -Untested technologies -Operation & Maintenance data is sparse -Technology may not be compatible with CHSRA -Capital costs need more vetting -Corridor not well-suited for high-speed Maglev technology. There are 14 stops in a 33-mile segment in the P.E. ROW which greatly reduces the capability of high-speed Maglev -LACMTA and OCTA own the P.E. ROW and have not shown any indication of giving the ROW to the Orangeline Development Authority -Minimal support from Orange County cities and no commitment from OCTA	**Include in the Strategic Plan.** **Conduct Alternatives Analysis as to appropriate mode and technology options.**

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
1	Initial Operating Segment (IOS)	yes	Fully grade-separated, elevated High-Speed Regional Transport (HSRT) system that operates primarily within freeway corridors. The 63-mile adopted IOS is from West L.A./LAX to L.A. Union Station to West Covina to Ontario Airport.	$19 billion for passenger service only (Assumes small amount of public ROW and small amount of land purchases in constrained areas. Land purchases for stations not included).	$0 commitment at this time	The energy impacts would generally be lower due to an increased transit ridership.	-Environmentally friendly -Helps regional economy -Increases transit ridership -Relieves overcrowding at LAX and shifts air passengers to Ontario -Improves public health -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, CHSRA)	-Inadequate funding commitment -Untested technologies -Operation & Maintenance data is sparse -West L.A. station site not selected. Land availability is questionable. -Technology may not be compatible with CHSRA -Community issues with HSRT coming to LAX	**Include in the Constrained Plan.** **Requisite Milestones:** -Need to identify source of public subsidy for environmental work -Form JPA for the IOS -Form public-private partnership -Secure funding -Technology selection
2	Extended Initial Operating Segment (IOS plus San Bernardino)	yes	The adopted IOS plus an 18-mile extension to San Bernardino.	$3.5 billion	$0 commitment at this time	As with option #1, the energy impacts would generally be lower due to an increased transit ridership.	-Environmentally friendly -Helps regional economy -Increases transit ridership -Relieves overcrowding at LAX and shifts air passengers to Ontario -Improves public health -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, CHSRA) -San Bernardino supportive of HSRT	-Inadequate funding commitment -Untested technologies -Operation & Maintenance data is sparse -West L.A. station site not selected. Land availability is questionable. -Technology may not be compatible with CHSRA -Community issues with HSRT coming to LAX	**Include in the Constrained Plan.** **Requisite Milestones:** -Need to identify source of public subsidy for environmental work -Form JPA for the IOS -Form public-private partnership -Secure funding -Conduct Preliminary Engineering (P.E.) for IOS extension to San Bernardino -Technology selection
3	Anaheim-Ontario	Represent-ed on the Maglev map in the 2004 RTP for further study but not in the 2004 RTP Constrained Plan	The Anaheim to Ontario segment is 32-miles and takes approximately 18 minutes. This link would connect commuters from Riverside County to job centers in Orange County and shift air passengers from JWA to Ontario Airport.	$6.7 billion (Assumes public ROW and no land purchases).	$0 commitment at this time for the Anaheim to Ontario portion. $45 million allotted for the Nevada segment (Las Vegas to Primm) under T3 federal legislation. Attempt by CNSSTC, OCTA and Anaheim to reconciliate the federal funding to allow some of the $45 million to be spent on planning and environmental work in the Anaheim to Ontario segment. OCTA is also in negotiations with CHSRA to fund a feasibility study in the Anaheim to Ontario corridor if funding is available.	As with option #1, the energy impacts would generally be lower due to an increased transit ridership.	-Environmentally friendly -Helps regional economy -Increases transit ridership -Relieves overcrowding at JWA and LAX and shifts air passengers to Ontario Airport -Clears out the heavily congested SR-91or SR-57 corridor during peak commute times -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, CHSRA) -Will serve the planned Anaheim Regional Transportation Intermodal Center (ARTIC)	-Inadequate funding commitment -Relying on federal funding to cover capital costs is unlikely -Untested technologies -Technology may not be compatible with CHSRA -Capital costs need to be revisited and refined -Route to Inland Empire not yet selected -Significant environmental issues (i.e., the Prado Dam, species habitat) in the corridor	**Include in the Constrained Plan.** **Requisite Milestones:** -Need to identify source of public subsidy for environmental work -Secure funding -Form public-private partnerships -Feasibility and planning studies needed -Form partnerships with OCTA and/or CNSSTC -Select route to Inland Empire (SR-91 or SR-57) -Conduct a feasibility study that examines possible intermediate stops

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
4	Spur from the IOS mainline to the San Pedro Bay Ports	no	The 18-mile freight-only spur connects the San Pedro Bay Ports to the IOS at Hobart Yard, which is a few miles east of Union Station. From Hobart Yard to San Bernardino, the IOS ROW will serve both passenger and freight traffic.	$18 billion (Assumes small amount of public ROW and small amount of land purchases in constrained areas. Does not include: Land purchases for stations, port automation costs, purchase of land and construction costs at the San Pedro Ports and selected Inland Port facilities)	$0 commitment at this time	As with option #1, the energy impacts would generally be lower due to an increased transit ridership. Additional impacts are dependent on energy generation. California imports about 31 percent of its annual electricity supply from out-of-state generating units, and about 75 percent of this power (4,744 MW) comes from coal. California imports about 31 percent of its annual electricity supply from out-of-state generating units, and about 75 percent of this power (4,744 MW) comes from coal. (Source: California Energy Commission, Gross System Power 2006. Retrieved on October 22, 2007 from http://energy.ca.gov/electricity/gross_system_power.html)	-Relieves port congestion -Environmentally friendly -Helps regional economy -Improves public health -Will provide construction jobs	-Inadequate funding commitment -Location of inland port facilities need to be identified -Port infrastructure requirements/costs need to keep up with HSRT system -Untested technologies -Little interest from shippers and ports -Operation & Maintenance data is sparse	**Include in the Constrained Plan.** **Requisite Milestones:** -Need to identify source of public subsidy for environmental work -Secure funding -Form public-private partnerships -More in-depth engineering and design work -Form partnerships with stakeholders
5	Long-term HSRT (post 2035) system	yes	The following routes will be further studied: LAX-South (Orange County down Interstate 405), LAX-Palmdale, Irvine to San Bernardino, San Bernardino to Victorville, Victorville to Palmdale, and March Airport to San Diego. Feasibility studies have been completed for the LAX-South and the LAX-Palmdale routes, but more in-depth analysis is needed.	TBD	$0 commitment at this time	As with option #1, the energy impacts would generally be lower due to an increased transit ridership. Additional impacts are dependent on energy generation.One freight train can remove 120 Heavy Goods Vehicle journeys from our roads. Rail is significantly more energy efficient than other modes with the exception of shipping. Per ton carried, road transport will requires between 4 to 7 times more energy than rail. With less trucks on the road there is less congestion and additional emissions from idle cars and idle trucks. (Source: Freight Transportation Summary http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/california/ca2.pdf)	-Environmentally friendly -Helps regional economy -Increases transit ridership -Relieves overcrowding at LAX and shifts air passengers to Ontario, Palmdale, San Bernardino and March airports -Improves public health -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, CHSRA)	-Inadequate funding commitment -Untested technologies -Operation & Maintenance data is sparse -Technology may not be compatible with CHSRA -Capital costs unclear -Little or no study has been done on these corridors	**Include in the Strategic Plan.** **Requisite Milestones:** -Secure funding -Form public-private partnerships -Feasibility and planning studies needed -Form partnerships with stakeholders

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
6	Orangeline (Orangeline Development Authority)	yes	108-mile grade-separated, elevated Maglev down the Pacific Electric ROW through central Orange County to L.A. Union Station out to Santa Clarita and Palmdale. The Orangeline Development Authority (OLDA) is a JPA made up of cities from L.A. and Orange Counties. The financial plan calls for private funding for most capital costs.	$42.5 billion	-$250,000 planning grant from the federal government -$1 million in-kind commitment from private sector group led by Arcadis -Dues from 14 member cities of the JPA -No other financial commitment from the private sector at this time	As with option #1, the energy impacts would generally be lower due to an increased transit ridership. Additional impacts are dependent on energy generation.	-Environmentally friendly -Helps regional economy -Increases transit ridership -Relieves overcrowding at LAX and shifts air passengers to Ontario, Palmdale, San Bernardino and March airports -Improves public health -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, CHSRA)	-Inadequate funding commitment -Untested technologies -Operation & Maintenance data is sparse -Technology may not be compatible with CHSRA -Capital costs need more vetting -Corridor not well-suited for high-speed Maglev technology. There are 14 stops in a 33-mile segment in the P.E. ROW which greatly reduces the capability of high-speed Maglev -LACMTA and OCTA own the P.E. ROW and have not shown any indication of giving the ROW to the Orangeline Development Authority -Minimal support from Orange County cities and no commitment from OCTA	**Remove from HSRT matrix and include in Transit matrix.**
7	Ontario Airport to California/ Nevada stateline Maglev (California-Nevada SuperSpeed Train Commission)	Represent-ed on the Maglev map in the 2004 RTP for further study but not in the 2004 RTP Constrained Plan	As a portion of the 269-mile grade-separated Maglev system from Anaheim to Las Vegas, Nevada, the Ontario to California/Nevada stateline segment would link the outlying Inland Empire with the central part of the SCAG region. The finance plan is to garner federal funding for capital construction.	$40.4 billion (194-mile segment)	$45 million allotted for the Nevada segment under T3 legislation. Attempt by CNSSTC, OCTA and Anaheim to reconciliate the federal funding to allow some of the $45 million to be spent on planning and environmental work in the Anaheim to Ontario segment.	As with option #1, the energy impacts would generally be lower due to an increased transit ridership. Additional impacts are dependent on energy generation.	-Environmentally friendly -Helps regional economy -Increases transit ridership -Relieves overcrowding at JWA and LAX and shifts air passengers to Ontario Airport -Clears out the heavily congested SR-91or SR-57 corridor during peak commute times -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, CHSRA)	-Inadequate funding commitment -Relying on federal funding to cover capital costs is unlikely -Untested technologies -Operation & Maintenance data is sparse -Technology may not be compatible with CHSRA -Capital costs are old and need to be updated -Route to Inland Empire not yet selected -Significant environmental issues (i.e., the Prado Dam, species habitat) in the corridor	**Include in the Strategic Plan.** **Requisite Milestones:** -Secure funding -Form public-private partnerships -Feasibility and planning studies needed -Form partnerships with OCTA and CNSSTC -Select route to Inland Empire (SR-91 or SR-57)
8	California High-Speed Train (serving the SCAG region) (California High-Speed Rail Authority)	No	700-mile steel wheel statewide high-speed rail network that will serve the Bay Area, Sacramento, the San Joaquin Valley, Los Angeles, Orange County, the Inland Empire and San Diego. The portion of the system in the SCAG region connects Palmdale to Union Station and Anaheim. There is also a link from Union Station east to Riverside and south headed to San Diego.The system would compete directly with air travel for the long-haul intrastate trips.	$34 billion (210 miles serving the SCAG region)	$20.7 million allocated from the California state legislature to continue funding the state agency. $3.5 million in funding from OCTA to begin the EIR for the L.A. to O.C. segment in FY '07-'08. $3.5 million more in funding from OCTA in FY '08-'09. Funding for capital construction for this project is proposed to be from state bonds. A $9.95 billion bond is slated for the November 2008 ballot.	According to the Final EIR/EIS for the proposed California High-Speed, the system would potentially decrease intercity automobile VMT and reduce fuel use by the equivalent of 5.2 million barrels of oil per year.	-Steel wheels is proven technology with standardized O&M costs -Environmentally friendly (although maybe less so than Maglev) -Helps state economy -Increases transit ridership -Relieves overcrowding at major airports -Provides an option to flying for intrastate connections -Connects city centers in Northern and Southern California -Improves public health -Will provide construction jobs -Provides intermodal connections with other systems (e.g., Metrolink, SCAG's HSRT, Caltrain) -San Diego (SANDAG) includes CHSRA project in their RTP's fiscally constrained plan	-Inadequate funding commitment -Passage of bond(s) can be difficult -Using "old" technology -Technology not compatible with Maglev systems not be compatible with CHSRA -Political support at the state level not certain -Potential political opposition from the airlines	**Include in the Constrained Plan, with the following conditions:** -Southern California must be included in initial construction -A study looking at alternative technoligies (Maglev and other systems) must be undertaken for the Southern California portion -A detailed constrained financial plan must be presented to ensure Southern California funding is spent on Southern California segments **Requisite Milestones:** -Secure funding -Complete EISs for various segments -SCAG should continue its' partnership with CHSRA

#	MODE/ PROJECT	2004 RTP	STRATEGIES	COST	FINANCIAL COMMITMENTS	ENERGY IMPACTS	PROS	CONS	RECOMMENDATION
1	Aviation Task Force Preferred Scenario with Extended IOS and Anaheim to Ontario HSRT segment	No	Complete Extended IOS portion of adopted HSRT system with Anaheim to Ontario segment and implement market incentives for aviation decentralization	$22.5 billion to implement Extended IOS portion of adopted HSRT system (passengers only). Local airport ground access projects $5.2-12 billion	For on-airport projects, passenger facility charges, revenue bonds, airport revenues (landing fees, concessions, leases etc.) and FAA AIP grants (not included in the RTP). $5.2 billion for non-HSRT off-airport ground access projects	Fewer jobs/housing benefits could result in higher energy use given that mixed land use (i.e., residential developments near work places, restaurants, and shopping centers) with access to public transportation has been shown to save consumers up to 512 gallons of gasoline per year. (Source: Transportation Demand Management Encyclopedia. "Transit Oriented Development." Victoria Transport Policy Institute.)	Problems and uncertainties associated with implementing full HSRT avoided (the extended IOS has a better "business case" but still has funding uncertainties). New terminal development and ground access improvements needed at San Bernardino and Palmdale airports, but less extensive at Palmdale Airport than with full HSRT system.	At 162 MAP a loss of 8 MAP compared to 2035 regional aviation scenario with entire adopted HSRT system. Fewer economic and jobs/housing balance benefits particularly in North LA County.	**Include in the Constrained Plan.** **Requisite Milestones:** - Same as for the HSRT IOS, but with emphasis on developing terminal-to-terminal airport linkages in in-depth engineering and design work for HSRT. - Complete HOV/Flyaway study and develop recommendations on utilizing existing and planned investments in HOV and rail facilities to decentralize aviation demand to suburban airports. - Continue to coordinate with the Southern California Regional Airport Authority (SCRAA) to implement the Regional Aviation Decentralization Strategy through ground access, legislative and marketing strategies.
2	Aviation Task Force Preferred Scenario with entire HSRT system, with Anaheim to Ontario segment	No	Complete entire adopted HSRT system with Anaheim to Ontario segment, that is necessary to reach 170 MAP and implement market incentives for aviation decentralization	Cost to be determined to implement entire adopted HSRT system with long-range connections to Victorville and San Bernardino (passengers only) local airport ground access projects $5.2-12 billion	For on-airport projects, passenger facility charges, revenue bonds, airport revenues (landing fees, concessions, leases etc.) and FAA AIP grants (not included in the RTP). $5.2 billion for non-HSRT off-airport ground access projects.	The higher passenger forecasts could be tempered by greater efficiencies in jobs/housing balance benefits. However, aviation passenger mobility efficiency is very dependent on the type of aircraft, the configuration, the load factor, and the distance flown. (Source: United Nations Environment Programme. Aviation and the Global Atmosphere. Retrieved October 22, 2007 from http://www.grida.no/climate/ipcc/aviation/index.htm.)	Achieves 170 MAP with associated economic and jobs/housing balance benefits to the Inland Empire and North LA County.	Extensive new passenger terminals and ground access improvements needed at Palmdale and San Bernardino International airports. Air quality impacts likely greater than other scenarios because of higher number of aircraft operations (but partly offset by fewer ground access emissions from HSRT).	**Include in the Strategic Plan, mid- and long-term.** **Requisite Milestones:** - Same as for the entire HSRT long-term system, but with emphasis on developing terminal-to-terminal airport linkages in in-depth engineering and design work and feasibility and planning studies for HSRT. - Complete HOV/Flyaway study and develop recommendations on utilizing existing and planned investments in HOV and rail facilities to decentralize aviation demand to suburban airports. - Continue to coordinate with the Southern California Regional Airport Authority (SCRAA) to implement the Regional Aviation Decentralization Strategy through ground access, legislative and marketing strategies.
3	Aviation Task Force Preferred Scenario with no HSRT	Yes	No HSRT implementation but implement market incentives for aviation decentralization	N0 HSRT costs. Other ground access costs in unconstrained Airport Ground Access Element total $12 billion ($5.2 billion constrained)	For on-airport projects, passenger facility charges, revenue bonds, airport revenues (landing fees, concessions, leases etc.) and FAA AIP grants (not included in the RTP). $5.2 billion for non-HSRT off-airport ground access projects.	As in #1, fewer jobs/housing benefits could result in higher energy usage.	Problems and uncertainties associated with implementing HSRT avoided. New terminal development and ground access improvements needed at Palmdale and San Bernardino International airports much less extensive	At 152.6 million air passengers (MAP) in 2035, this scenario represents a loss of 17.4 MAP compared to 2035 regional aviation scenario with entire adopted HSRT system. Fewer economic and jobs/housing balance benefits to the Inland Empire and North LA County. Represents a loss of about $11 billion and 78,600 jobs compared to the 2035 scenario with the entire adopted HSRT system.	**Do not include in the 2008 RTP.** **Requisite Milestones:** - Complete HOV/Flyaway study and develop recommendations on utilizing existing and planned investments in HOV and rail facilities to decentralize aviation demand to suburban airports. - Continue to coordinate with the Southern California Regional Airport Authority (SCRAA) to implement the Regional Aviation Decentralization Strategy through ground access, legislative and marketing strategies.

#	2004 RTP	POLICY	DESCRIPTION	ENERGY IMPACTS	BENEFITS	COSTS	RECOMMENDATION
1	Yes	**Identify regionally strategic areas for infill and investment***	Identify strategic opportunity areas for infill development of aging and underutilized areas and increased investment in order to accommodate future growth.	The energy consumption would generally be low and could be further reduced if green building practices, involving usage of renewable resources and reduced waste generation and water usage, are implemented. Such standards can reduce local environmental impacts, regional air pollutant emissions, and global greenhouse gas emissions.	- reduces regional VMT, VHT and congestion delay - efficient use of existing and planned infrastructure - revitalizes aging communities - increases local tax base - reduces sprawling development patterns	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**
2	Yes	**Structure the plan on a 3-tiered system of centers development***	Identify strategic centers based on a 3-tiered system of existing, planned, and potential, relative to transportation infrastructure.	The energy consumption would generally be low and could be further reduced if green building practices, involving usage of renewable resources and reduced waste generation and water usage, are implemented.	- reduces regional VMT, VHT and congestion delay - prioritizes investment based on infrastructure timing - supports long range conceptual planning in advance of financial commitments	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**
3	No	**Develop nodes on a corridor***	Intensify nodes along corridors with people-scaled, mixed use developments. Many existing corridors lack the residential and commercial concentration to adequately support non-auto transit uses, without which the existing transit system cannot fully realize its potential for accommodating additional trips and relieving the transportation system.	Creating walkable, transit oriented nodes would generally reduce energy use. It is estimated that households in transit-oriented developments drive 45 percent less than residents in auto-dependent neighborhoods. (Source: Transportation Demand Management Encyclopedia. “Transit Oriented Development.” Victoria Transport Policy Institute.)	- reduces regional VMT, VHT and congestion delay - creates vibrant, walkable communities with localized access to amenities - supports region's existing & planned transit infrastructure	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**
4	Yes	**Develop “complete communities”***	Create mixed use districts or “complete communities” in strategic growth areas, through a concentration of activities with housing, employment, and a mix of retail and services, located in close proximity to each other.	Creating walkable, complete communities would generally reduce energy use. It has the potential to reduce total VMT, ultimately reducing gas consumption.	- reduces regional VMT, VHT and congestion delay -ensures many daily needs can be met within a short distance of home - increases walk and bicycle trip opportunities - supports lower VMT through "trip chaining"	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**
5	Yes	**Plan for additional housing and jobs near transit***	Plan for additional housing and jobs within reach of the transit network. Pedestrian-friendly environments and more compact development patterns in close proximity to transit serve to support and improve transit use and ridership.	Fostering more residential and mixed use developments near transit hubs will increase public transit ridership and reduce VMT, emissions, and fuel consumption. Mixed-use development may also reduce congestion by fostering a jobs-housing balance.	- reduces VMT, VHT and congestion delay - reduces auto use and supports more multi modal travel behavior - reduces need for long commutes -increases viability of rail network for home to work trips	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**

#	2004 RTP	POLICY	DESCRIPTION	ENERGY IMPACTS	BENEFITS	COSTS	RECOMMENDATION
6	Yes	**Plan for a changing demand in types of housing***	Plan for changing demographics and subsequent impacts on the region's economic future. Shifts in the labor force, as the large cohort of aging "baby boomers" retire over the next 15 years and are replaced by new immigrants and "echo boomers", will likely induce a demand shift in the housing market for additional development types such as multi-family and infill housing in central locations.	The energy impacts could be low if focused on multi-family housing. Residents of single family detached housing have been found to consume 22 percent more energy than those of multifamily housing and 9 percent more than those of single-family attached housing. (Source: Rong, Fang. (2006) Impact of Urban Sprawl on U.S. Residential Energy Use. University of Maryland. Retrieved from http://hdl.handle.net/1903/3848 on September 14, 2007.)	- reduces regional VMT, VHT and congestion delay - supports needs and lifestyles of growing segments of the population - increases affordable housing alternatives - supports changing market dynamics - limits greenfields development	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**
7	Yes	**Continue to protect stable existing single family areas***	Continue to protect stable existing single family neighborhoods as future growth and a more diverse housing stock are accommodated in infill locations near transit stations, in nodes along corridors and in existing centers.	The energy impacts would generally be higher. Single-family residents use more energy than their counterparts in multi-family housing.	- reduces regional VMT, VHT and congestion delay - maintains existing urban fabric in the majority of the region - reduces NIMBYism of intensification of appropriate areas	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**
8	Yes	**Ensure adequate access to open space and preservation of habitat**	Ensure access to open space and habitat preservation despite competing quality of life demands driven by growth, housing and employment needs, and traditional development patterns.	This option would reduce autodependent development, thereby reducing VMT and the associated fuel use.	- reduces regional VMT, VHT and congestion delay - improves access to existing large-scale and neighborhood-scale open space - preserves the rapidly diminishing open space - limits leap frog development	No direct costs in RTP SCAG should work to identify funding resources to assist local governments' voluntary implementation	**Include in the 2008 Draft Policy Growth Forecast Alternative.**
9	Yes	**Incorporate local input and feedback on future growth assumptions**	Continue public outreach efforts as required by SAFTEA-LU and incorporate local input through the Integrated Growth Forecast. This innovative approach provides a more accurate forecast that integrates future land use and transportation planning through growth projections for population, employment, households and housing units. Public workshops, scenario planning, and stakeholder outreach improve the accuracy and feasibility of pursuing regional plans at the local level.	It is unclear what energy impacts would accrue from this option.	- increases consistency between local and regional forecasts - identifies areas where descepencies may exist - improves discourse between government agencies, stakeholders and the public	No direct costs in RTP	**Include in the 2008 Draft Policy Growth Forecast Alternative.**